

## **CLAIMS**

This list of claims will replace all prior versions, and listings, of claims in the application:

### **Listing of Claims:**

1. (Presently Amended) A data communications server system for managing intrathecal therapy, comprising:
  - a computerized network of patient nodes, clinician nodes, pharmaceutical nodes, drug pump manufacturer nodes; and
  - means for configuring implantable drug pumps with data gathered from a patient, a clinician, a drug pump manufacturer, and a pharmacy.
2. (Original) The data communication server system of claim 1, wherein the implanted drug pump collects at least a portion of the data.
3. (Original) The data communications server system of claim 1, wherein the intrathecal therapy distributed comprises instructions to implanted drug pumps to optimize the life of the drug pump and the intrathecal therapy.
4. (Presently Amended) A computerized method of collecting and utilizing distributed patient, clinician, implantable drug pump, and pharmaceutical data, comprising the steps of:
  - a. providing a data communications network from which each remote node may access, directly or indirectly, a central server system;
  - b. providing to the remote network nodes a computerized interface to resources of the server;
  - c. gathering via the remote network node computerized interfaces individual patient implantable drug pump information;
  - d. aggregating the patient, clinician, drug pump, and pharmaceutical information; and
  - e. distributing the patient, clinician, drug pump, and pharmaceutical information to remote network nodes administered by clinicians.
5. (Original) The computerized method of claim 4, wherein the central server system comprises a network of servers.

6. (Original) The computerized method of claim 4, wherein the computerized interface to the central server system is implemented as an html browser utility.
7. (Original) The computerized method of claim 4, wherein the resources of the central server system comprise a body of empirical data regarding implantable drug pumps.
8. (Original) The computerized method of claim 7, wherein the resources of the central server system further comprise a system of comparing and analyzing the body of empirical data.
9. (Original) The computerized method of claim 7, wherein the empirical data regarding implanted drug pumps comprises data identifiable to individual drug pumps.
10. (Original) The computerized method of claim 9, wherein the data identifiable to individual drug pumps may be accessed by the patient, clinician, pharmacy, and drug pump manufacturer to which this data pertains.
11. (Original) The computerized method of claim 10, wherein the data identifiable to individual drug pumps is protected by an encryption protocol when accessed.
12. (Original) The computerized method of claim 11, wherein the security protocol protecting the data identifiable to individual drug pumps is a secure socket layer.
13. (Original) The computerized method of claim 11, wherein the security protocol protecting the data identifiable to individual drug pumps is the https protocol.
14. (Original) The computerized method of claim 11, wherein a user attempting to access data identifiable to an individual drug pump must authenticate themselves prior to receiving the data.
15. (Original) The computerized method of claim 14, wherein the authentication to which a user is subject comprises strong authentication.
16. (Original) A real-time information management system for implantable drug pumps, comprising:
  - a computerized data communication server network that allows patients, clinicians, pharmacists, and drug pump manufactures to view, analyze and display data concerning the implantable drug pump;
  - a server-based interface to disseminate to patients, clinicians, pharmacists, and drug pump manufactures information about their drug pumps;
  - means configuring implantable drug pumps to manage intrathecal therapy.

17. (Original) The real-time information management system of claim 16, wherein the information about implantable drug pumps comprises technology developments, clinical trials, and medication utilized by the drug pump.
18. (Original) A computerized method of communicating in real time between patients, clinicians, pharmacists, and implanted drug pump manufactures comprising the steps of:
- a. capturing implanted drug pump device data;
  - b. storing the implanted drug pump device data on a central server system;
  - c. analyzing and distributing aggregate drug pump device information;
  - d. displaying drug pump-specific data in real time over a public network; and
  - e. dispensing intrathecal therapy.
19. (Original) The computerized method of claim 18 wherein the patient is able to monitor intrathecal therapy.
20. (Original) The method of claim 18 wherein the displaying of drug pump specific data over a public network is done using a secure protocol with an authenticated client.
21. (Presently Amended) A data communications server system for managing intrathecal therapy, comprising:  
a computerized network comprising patient nodes, clinician nodes, drug pump manufacturer nodes, and pharmaceutical nodes;  
means for prescribing therapeutic substances with data gathered from at least one patient, at least one clinician, at least one drug pump manufacturer, and at least one pharmacy.  
means for configuring implantable drug pumps with data gathered from at least one patient, at least one clinician, at least one drug pump manufacturer, and at least one pharmacy.
22. (Original) The data communication server system of claim 21, wherein the means for prescribing therapeutic substance includes a therapeutic substance refill interval.
23. (Original) The data communications server system of claim 21, wherein the means for prescribing therapeutic substance includes a therapeutic substance stability safeguard.
24. (Original) The data communications server system of claim 21, wherein the means for prescribing therapeutic substance includes a therapeutic substance compatibility safeguard.

25. (Original) The data communications server system of claim 21, wherein the means for prescribing therapeutic substance includes an optoid conversion means.
26. (Original) The data communications server system of claim 21, wherein the means for prescribing therapeutic substance includes a therapeutic substance safe dosage range safeguard.
27. (Original) A computerized method of communicating in real time between patients, clinicians, pharmacists, and implanted drug pump manufactures, comprising the steps of:
- a. capturing implanted drug pump device data;
  - b. storing the implanted drug pump device data on a central server system;
  - c. analyzing and distributing aggregate drug pump device information;
  - d. displaying drug pump-specific data in real time over a public network;
  - e. prescribing therapeutic substances; and
  - f. dispensing intrathecal therapy.
28. (Original) The method of claim 27 wherein the prescribing of therapeutic substances includes calculating a refill interval optimized to prevent unnecessary surgeries.
29. (Original) The method of claim 27 wherein the prescribing of therapeutic substances includes calculating a safe dosage to prevent prescribing erroneous dosages.
30. (Presently Amended) The method of claim 27 wherein the prescribing of therapeutic substances includes calculating the substance's stability and compatibility with the drug pump to prevent harmful interaction.
31. (Original) The method of claim 27 wherein the prescribing of therapeutic substances includes an optoid conversion calculator.